

Title (en)  
EMBEDDING AND DETECTING A WATERMARK IN IMAGES

Title (de)  
EINBETTUNG UND ERKENNUNG VON WASSERZEICHEN IN BILDERN

Title (fr)  
INCORPORATION ET DETECTION D'UN FILIGRANE DANS DES IMAGES

Publication  
**EP 0981899 A2 20000301 (EN)**

Application  
**EP 99900013 A 19990108**

Priority

- EP 99900013 A 19990108
- EP 98200034 A 19980109
- IB 9900013 W 19990108

Abstract (en)  
[origin: WO9935836A2] A digital image signal is watermarked by locally changing geometric features of the image. The watermark consists of a pseudo-random, dense subset of image pixels, e.g. a pattern of lines (20). A number of significant image pixels (21, 22, 23), i.e. pixels which give the highest response to a predetermined processing operation, is determined and then moved (24) to the vicinity (delta) of the line pattern. As a result of this "warping", the majority of significant image pixel (21, 22) is eventually located within the vicinity of the line pattern. At the receiver end, the most significant pixels of an input image are again determined. The image is a watermarked image if a statistically high percentage lies within the vicinity of the line pattern.

IPC 1-7  
**H04N 5/913**

IPC 8 full level  
**G06T 1/00** (2006.01); **H04N 1/32** (2006.01); **H04N 1/387** (2006.01); **H04N 5/913** (2006.01)

CPC (source: EP KR US)  
**G06T 1/0021** (2013.01 - EP US); **G06T 1/0064** (2013.01 - EP US); **H04N 1/32203** (2013.01 - EP US); **H04N 1/32219** (2013.01 - EP US); **H04N 5/913** (2013.01 - EP KR US); **G06T 2201/0051** (2013.01 - EP US); **H04N 2005/91335** (2013.01 - EP US)

Citation (search report)  
See references of WO 9935836A2

Designated contracting state (EPC)  
DE ES FR GB IT SE

DOCDB simple family (publication)  
**WO 9935836 A2 19990715**; **WO 9935836 A3 19990923**; CN 1184808 C 20050112; CN 1256839 A 20000614; DE 69928613 D1 20060105; DE 69928613 T2 20060810; EP 0981899 A2 20000301; EP 0981899 B1 20051130; JP 2001515688 A 20010918; JP 3984301 B2 20071003; KR 100602398 B1 20060720; KR 20000076095 A 20001226; US 6198832 B1 20010306

DOCDB simple family (application)  
**IB 9900013 W 19990108**; CN 99800214 A 19990108; DE 69928613 T 19990108; EP 99900013 A 19990108; JP 53589599 A 19990108; KR 19997008183 A 19990909; US 22653299 A 19990107